

## **REMARKS/ARGUMENTS**

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the foregoing amendment and the following remarks.

The Applicants originally submitted Claims 1-18 in the application. Previously, the Applicants added new Claims 19-20 and canceled Claims 2 and 11. Presently, the Applicants have amended Claims 1, 8, 10 and 17, and canceled Claims 7 and 16 without prejudice or disclaimer. No other claims have been amended, canceled nor added. Accordingly, Claims 1, 3-6, 8-10, and 12-15, 17-20 are currently pending in the application.

### **I. Rejection of Claims 1, 3, 4-5, 7-8, 10, 12-14 and 16-17 under 35 U.S.C. §102**

The Examiner has rejected Claims 1, 3, 4-5, 7-8, 10, 12-14 and 16-17 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,545,581 to Armacost, *et al.* ("Arm"). Independent Claims 1 and 10 currently include the element of siliciding a polysilicon gate electrode to form a silicided gate electrode in a step after forming a blocking layer comprising a metal silicide, wherein the blocking layer protects the source/drain regions from the subsequent siliciding of the polysilicon gate electrode. Independent Claims 1 and 10 further include the element of forming a second silicidation metal in contact with the polysilicon gate electrode and in contact with the previously formed blocking layers. Arm fails to disclose each of these elements.

Arm, in contrast to the present invention, is directed to a plug strap process utilizing selective nitride and oxide etches. (Title). Arm teaches that a gate stack **24**, including a gate oxide

16, polysilicon gate 18, metal 20 and cap 22 is formed over a substrate 14. Arm then teaches that source/drain implants 28 are formed proximate the gate stack 24. Arm additionally teaches that a titanium silicide element 34 may be formed over/from the source/drain implants 28. Thereafter, Arm teaches that a layer of nitride 36 and an insulation layer 38 are formed over the gate stack 24, and appear never to be removed. Accordingly, after forming the titanium silicide element 34 over/from the source/drain implants 28, no other silicidation steps occur to the gate stack 24.

Accordingly, Arm fails to disclose a number of claimed elements. First, Arm fails to disclose the claimed element of siliciding the polysilicon gate electrode after forming the blocking layers comprising the metal silicide. Interestingly, this element was present within the claims that were previously submitted to the Examiner. Accordingly, even though the Applicants chose to amend the claims in the present response, it is not the claim amendments that necessitate a new ground of rejection, but the fact that Arm fails to disclose the previously claimed elements. In essence, even if the Applicants did not presently amend the claims, the Examiner would have had to search for new art as Arm is lacking. Second, however, Arm fails to disclose forming a second silicidation metal in contact with the polysilicon gate electrode and in contact with the blocking layers, which is a newly added element. Additional claimed elements are also missing from Arm.

Therefore, Arm does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Because Claims 3, 4-5, 8, 12-14 and 17 are dependent upon Claims 1 and 10, Arm also cannot be an anticipating reference for Claims 3, 4-5, 8, 12-14 and 17. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to these Claims.

## II. Rejection of Claims 9 and 18 under 35 U.S.C. §103

The Examiner has rejected Claims 9 and 18 under 35 U.S.C. §103(a) as being unpatentable over Arm in view of U.S. Patent No. 6,514,859 to Erhardt, *et al.* ("Erhardt"). As previously indicated, independent Claims 1 and 10 currently include the element of siliciding a polysilicon gate electrode to form a silicided gate electrode in a step after forming a blocking layer comprising a metal silicide, wherein the blocking layer protects the source/drain regions from the subsequent siliciding of the polysilicon gate electrode. As further indicated, independent Claims 1 and 10 additionally include the element of forming a second silicidation metal in contact with the polysilicon gate electrode and in contact with the previously formed blocking layers. As previously established, Arm fails to disclose these elements. Arm further fails to suggest these elements. Namely, Arm fails to suggest these elements because Arm does nothing more to its gate stack 24 after forming its titanium silicide elements 34.

Erhardt fails to correct the deficiencies of Arm. The Examiner is offering Erhardt for the sole proposition that the polysilicon gate electrode may be fully silicided. Without even addressing whether the Examiner's proposition is accurate, a teaching or suggestion that the polysilicon gate electrode may be fully silicided is entirely different from a teaching or suggestion of siliciding a polysilicon gate electrode to form a silicided gate electrode in a step after forming a blocking layer comprising a metal silicide, wherein the blocking layer protects the source/drain regions from the subsequent siliciding of the polysilicon gate electrode. Moreover, a teaching or suggestion that the polysilicon gate electrode may be fully silicided is entirely different from a teaching or suggestion of

forming a second silicidation metal in contact with the polysilicon gate electrode and in contact with the previously formed blocking layers. Both of these elements are currently claimed. Accordingly, Erhardt also fails to teach or suggest these claimed elements.

Therefore, Arm alone or in combination with Erhardt, fails to teach or suggest the invention recited in independent Claims 1 and 10 and their dependent claims, when considered as a whole. Accordingly, the combination fails to establish a *prima facie* case of obviousness with respect to these claims. Claims 9 and 18 are therefore not obvious in view of the combination.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 9 and 18 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

### **III. Rejection of Claims 6 and 15 under 35 U.S.C. §103**

The Examiner has rejected Claims 6 and 15 under 35 U.S.C. §103(a) as being unpatentable over Arm in view of U.S. Patent No. 6,423,634 to Wieczorek, *et al.* ("Wi"). As previously indicated, independent Claims 1 and 10 currently include the element of siliciding a polysilicon gate electrode to form a silicided gate electrode in a step after forming a blocking layer comprising a metal silicide, wherein the blocking layer protects the source/drain regions from the subsequent siliciding of the polysilicon gate electrode. As further indicated, independent Claims 1 and 10 additionally include the element of forming a second silicidation metal in contact with the polysilicon gate electrode and in contact with the previously formed blocking layers. As previously established, Arm fails to teach or suggest these elements.

Wi fails to correct the deficiencies of Arm. The Examiner is offering Wi for the sole proposition that the thickness of the blocking layer may range from about 10 nm to about 35 nm. Without even addressing whether the Examiner's proposition is accurate, a teaching or suggestion that the thickness of the blocking layer may range from about 10 nm to about 35 nm is entirely different from a teaching or suggestion of siliciding a polysilicon gate electrode to form a silicided gate electrode in a step after forming a blocking layer comprising a metal silicide, wherein the blocking layer protects the source/drain regions from the subsequent siliciding of the polysilicon gate electrode. Moreover, a teaching or suggestion that the thickness of the blocking layer may range from about 10 nm to about 35 nm is entirely different from a teaching or suggestion of forming a second silicidation metal in contact with the polysilicon gate electrode and in contact with the previously formed blocking layers. Both these elements are currently claimed. Accordingly, Wi also fails to teach or suggest these claimed elements.

Therefore, Arm alone or in combination with Wi, fails to teach or suggest the invention recited in independent Claims 1 and 10 and their dependent claims, when considered as a whole. Accordingly, the combination fails to establish a *prima facie* case of obviousness with respect to these claims. Claims 6 and 15 are therefore not obvious in view of the combination.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 6 and 15 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

#### IV. Conclusion

In view of the foregoing amendment and remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1, 3-6, 8-10, and 12-15, 17-20.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 20-0668.

Respectfully submitted,

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